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ABSTRACT

This brief outline of areas of vocational education important for the educable mentally handicapped notes the following general areas which have implications for curriculum development: (1) psychomotor skills, (2) social development, and (3) community and job-related competencies. Educational needs for vocational training and program development for the retarded are discussed. Possible activities for developing psychomotor functions are listed, as one example of work aptitudes necessary for the retarded. Related documents are available in this issue as VT 018 484, VT 018 478, and VT 018 485. (AG)

## A RELOOK AT WORK APTITUDES FOR THE RETARDED

When one reviews the ruberic of vocational education for the retarded, it is evident that many good things have taken place. It is important to note that research and demonstration has affected curriculum change over the past years.

It is rare to find programs for the retarded that do not at least acknowledge the importance of vocational areas. Cooperative work programs, work vocabulary, job interview, role playing, work experience, and a host of factors related to work education have become a common part of the educational curricula. This has helped us feel that the retarded have a better chance for job success than they did several years ago. In my opinion, it has taken an inordinate amount of time and effort to reach this point.

While I have pointed out that we have come a long way in this field and that many positive things have happened, it is also true that we have a tremendous way to go. An example of the kind of thing I mean, and I am using fictitious figures, is that we note work success with the retarded has increased from 10% to 40%. This is an increase of 400% as is interpreted as quite good, but it also means that 60% is not so good. The latter figure dampens that huge increase and indicates the distance we have yet to travel. Now, these were imaginary numbers and I do not know if even an approximate set of numbers can be established. We can make the field look better by redefining our criteria. It is common practice, for instance, in cooperative programs to say success is three months, or so, staying on a job. But, if we follow up these "successes" some 6 months later, it is not unusual to find about 25 to 50% of these are not all that successful. Sometimes I wonder if we are being overly optimistic about our efforts to date.

Research, data reporting and program descriptions have suggested many important specifics that are paramount to the vocational field. A summary of these are to be found in one of the papers received at this meeting. Broadly speaking, these may be separated into four implication areas.

- (1) Society---Emphasis is placed with the work structure found in our environment. Job opportunity, types of available work, "economics," technology, and the occupational structure are but a few of the concerns here.

- (2) Social--The concern here centers about the social-emotional and interpersonal factors related to work. Emotional variables, appearance, communication skills, family, peer-group relationships, and social skills are some of the uniform specifics that are crucial as they relate to the retarded in vocations.
- (3) Physical--Motor activities are the primary interests as they are involved in work. Commonly stated concerns are work experiences, proficiency, work-samples, shop, home economics, and physical education among others.
- (4) Programs--The emphasis in this area has been those problems of specific school or agency programs. Discussion here talks about community job surveys, administration of work programs, articulation, acceptance, co-ordination activities, and curricula characteristics.

There is little question from those who work with the retarded in vocational programs that these are important concerns. It is evident that (Society) we need to pay attention to overall structure and how it might relate to the retarded. Curricula, in any educational setting, must continue to work hard on interpersonal (Social) variables. Appearance and emotional variables have been stressed to such a degree that they take up a large part of academic program. Further, it is difficult to find many Programs today that do not include work-experience and/or job training as part of their methodology. These things have had the effect of helping the retarded, in general, to be more vocationally successful than before. At least this is what is implied. If one can rely on the descriptions of research and demonstrations, which use certain definitions, the trend is to the kind of program that emphasizes these things. Yet it appears that something more needs to be done.

It seems, however, that many have come to believe that the variables so far mentioned somehow live in isolation. We know better; they do not. They are all inter-related into individual whole persons somehow trying to use himself in some area of the work world. If one part of this "whole" is deficit, successful job holdings, for any length of time, is difficult. It seems we could very well ask ourselves what is missing. What isn't being done? Where are the retarded not doing so well? This brings me to an area that I have purposely left to last---that of the Physical.

## AREAS OF VOCATIONAL EDUCATION RELATING TO THE RETARDED

The review of literature reveals enough agreement that in the area of occupational education, programs could be made in proper focus. In an incomplete review, "needs," indicators, findings, and concepts are summarized in the following outline as it related to the retarded:

### General Reviews

1. Work is mainly in unskilled and semi-skilled areas.
2. Need for family support.
3. Personal appearance is a factor.
4. Occupation structure is changing.
5. Importance of personal and social skills.
6. General "work skills" are needed.
7. Important to survey the community.

### Motor Implications

1. Training is possible for more subjects.
2. Large amount of variance in "skills."
3. Perception is somehow involved with many EMR.
4. WISC performance is a general predictor.
5. Generally, the EMR are "slow" in motor proficiency areas.
6. There has been a more than average success with the work-sample approach.
7. Motor proficiency is important in unskilled work.
8. Other variables are important with motor proficiency--- social, etc.

### Social Implications

1. Personal appearance is important
2. Social skills--- interaction is important.
3. Great need for student and parental counseling.
4. Emotional variables are directly related to work success.
5. Need to know community social structure.

### Programs

1. General acceptance of BVE as part of school curriculum innovation.
2. Teacher's need to know more about work skills.
3. Job surveys need to be made in each community.
4. Need for someone to act as liason between school-community-student-home.

## SUPPORTIVE LITERATURE

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One way to determine the motor function needs of the EMR is to discover the aptitudes needed in work areas, such as restaurant, industry, textile, maintenance, etc. Work - motor aptitudes needed might be envisioned as:

1. Dexterity (gross to time) - an example in restaurant work is stacking dishes, cleaning tables, placing into containers.
2. Coordination-an example of this can be seen in car washing where cleaning is done with both hands, use of different materials in step operations such as hose, sponge, towel, etc.
3. Thinking Situations-an example is classifying and sorting in a laundry, analyzing sorting and comparing placement of objects and materials in industry and textile operations.

Starting with simple objects, the EMR may be able to gain a better functioning in work aptitude areas. A series of phases might take on the following order:

#### Phase I

- a. Sorting Activities-(colored cards, objects to to size, numbers on cards, alphabetizing, bolt sorting, etc.).
- b. Assembling-nuts, bolts, and washers of different sizes, putting objects into general or specific containers, pegboard, etc.).
- c. Matching-(similar objects together, or separating objects.
- d. Speed-(timed operations as above).
- e. Coordination-(extracting objects from others, hand balancing objects, etc.).
- f. Coordinated Activities

handling dishes	arranging stock
stacking dishes	filling receptacles
sorting dishes	seeing
sorting silverware	dusting
wiping tables	mopping
handling dish truck	arranging food on plate
agility in movement	peeling vegetables
balancing trays	peeling fruits



Typing I	Collating
Making a bed	Adding machine I-hand
Design I	adding machine
Telling time	Adding machine II -10
Drilling	key adding machine
Micrometer	Stapling
Bolt sorting-BS I	Posting Exercise-Phone
Nut & bolt sorting BS II	Book Test
Nut sorting-BS III	Mail sorting
Nut sorting -BS IV	Window washing
Nut sorting -BS V	Textile sorting
Upholstering of footstool	Ironing I
Spray gun cleaning	Ironing II
Gross measuring	Ironing III
Replace faucet cut-off	Pattern Cutting I
washer	Sewing I
Sanding	Cash register oper-
Machine assembly-disassembly	ation
Elementary electrical	Packaging
circuiting	Paper cutting
Change making exercises	Soldering
Petty cash transactions	

### Phase III

Outgrowth of Phase II  
 Longer projects where possibility of working with  
 one or more, others.  
 Machine assembly  
 Stacking projects  
 Sorting and combining materials  
 Job replications

### Opportunity to observe interaction

perseverance	rate of progress
quantity	dexterity
quality	attention
response to supervision	judgement
co-worker relationship	behavior
	motivation

This type of activity is limited only by the imagination of the people involved. Making part of the classroom into a "work laboratory" can be helpful where students can see and use the materials.

Learning in this regard, may be the discovering of new



properties and discriminating material variables. Development could become a matter of what is seen and differentiating between objects.

This kind of learning is supported by Zeamon and House (1963) and discussed in Chapter I. They also point out the methods of Montessori (1912) and Fernald (1943) are similar in that attention value is strong and "novelty" is useful in getting and holding this dimension.